UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,499	04/19/2004	Heinrich Friederich	00635.0371-US-01	3463

22865 7590 10/24/2006

ALTERA LAW GROUP, LLC
6500 CITY WEST PARKWAY
SUITE 100
MINNEAPOLIS, MN 55344-7704

EXAMINER	
REESE, DAVID C	

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/827,499	FRIEDERICH ET AL.	
	Examiner	Art Unit	
	David C. Reese	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-10 and 12-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-10 and 12-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

THIS FINAL ACTION IS RESPONSIVE TO THE AMENDMENT FILED 8/8/2006.

- Claims 1-5 and 11 are canceled.
- Claim 14 was added.
- Claim 12 was amended.
- Claims 6-10 and 11 are pending.

Claim Objections

[1] Claims 7-8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In the instant case, the subject matter ("the spring element is of lower hardness than the screw element"; and "the spring element has projections in the region of the workpiece contact") from claims 7-8, respectively, is already claimed in the claim by which they are ultimately dependent upon, amended claim 12 (see last two lines of amended claim 12).

Claim Rejections - 35 USC § 103

[2] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[3] Claims 6-7, 9-10, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0989311 in view of Wagner, US-4,193,434, and in further view of Hsiao, US 6,302,629.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 12, EP 0989311 discloses of a screw element having a screw axis, comprising:

a tool engagement element (page 5 on the applicant's instant amendment); and

a spring element having a free edge (7');

wherein the spring element is formed on the screw element in one piece (page 6 on the applicant's instant amendment);

wherein the spring element is coaxial with the screw axis (page 6 on the applicant's instant amendment);

wherein the free edge defines a workpiece contact plane which is perpendicular to he screw axis and is spaced axially from the screw element;

wherein the spring element is mounted at the periphery of the screw element;

wherein the spring element projects radially beyond the periphery;

wherein the spring element forms a workpiece contact, which is disposed outside the periphery of the screw element and is concentric with the screw axis;

wherein the spring element is a ring which is concentric around the screw axis;

wherein the spring element has a workpiece contact which is annular throughout; and

wherein the spring element is [adapted to prevent the pre-stressing effect for the screw connection being lost by virtue of changes in length thus ensuring sufficient frictional force to prevent the screw connection becoming unscrewed], and

wherein the spring element is of lower hardness than the screw element

With regard to that in brackets [] above: Note that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation, but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison, 69 USPQ 138.*

The difference between the claim and EP 0989311 is the claim recites: wherein the ring has a plurality of openings distributed uniformly over its periphery; and wherein the spring element has projections in the region of the workpiece contact.

With respect to the former issue above, Wagner discloses a fastener similar to that of EP 0989311, including that of a spring element 28 (Fig. 2 of Wagner). In addition to teaching of a similar spring element to EP 0989311, Wagner further teaches of additional embodiments that the structure of the spring element 28 can take, specifically including a modification of Fig. 5; showing a spring element with a plurality of openings distributed uniformly over its periphery. As stated profoundly in columns 3 and 4, beginning with line 50 in col. 3, it is stated that, "The spring constant of the flange 28 may be varied to suit the particular application...various modifications may be made to the spring-like flange 28 in order to reduce the spring constant for any given application...it should be noted that a plurality of closed apertures 48 are created in the flange is circumferentially spaced locations radially outwardly of inner peripheral surface 52, thus effectively forming a plurality of interconnected spring arm regions 50 and outer peripheral load bearing regions 54". It would have been obvious to one of ordinary skill in the art, having

the disclosures of EP 0989311 and Wagner before him at the time the invention was made, to modify the spring element of EP 0989311 to incorporate various modifications to said spring element, as in Wagner. One would have been motivated to make such a combination to help effectively eliminate the compressive load on a plastic workpiece, helping to reduce the spring load on the plastic while maximizing the total clamping load capacity of the column or load, as taught by Wagner.

With respect to the second, latter issue above, that is, of the spring element having projections in the region of the workpiece contact; Hsiao discloses a fastener similar to that of EP 0989311 in view of Wagner. In addition, Hsiao further teaches of projections in the region of the workpiece contact. It would have been obvious to one of ordinary skill in the art, having the disclosures of EP 0989311 in view of Wagner and Hsiao before him at the time the invention was made, to modify the spring element of EP 0989311 in view of Wagner to include projections, as in Hsiao. One would have been motivated to make such a combination because the projections can generate counter stresses, which can absorb any ways of torque and won't loose (abstract), as taught by Hsiao.

Re: Claim 6, EP 0989311 shows wherein the spring element has a relatively flat spring characteristic.

Re: Claim 7, EP 0989311 shows wherein the spring element is of lower hardness than the screw element.

Re: Claim 9, Wagner shows wherein the screw is of a thread-forming nature (20).

Re: Claim 10, EP 0989311 shows wherein only the spring element and it bears with a predetermined prestressing force against the adjoining workpiece.

Re: Claim 13, Wagner shows wherein the screw is of a self-boring nature.

As for Claim 14, EP 0989311 in view of above teaches of a screw element having a screw axis, comprising

a tool engagement element (page 5 on the applicant's instant amendment);

a spring element having a free edge (7');

said spring element being extending from the screw element to form one piece;

and is coaxial with the screw axis and mounted on the periphery of the screw element and projects radially from said periphery;

said free edge defining a workpiece contact plane which is substantially perpendicular to the screw axis and is spaced axially from the screw element;

wherein the spring element contacts a workpiece in a region outside the periphery of the screw element and is generally concentric with the screw axis;

wherein the spring element is a ring which is generally concentric around the screw axis;

wherein the ring has a plurality of openings distributed uniformly over its periphery (in view of Wanger);

wherein the spring element is [adapted to prevent the pre-stressing effect for the screw connection being lost by virtue of changes in length thus ensuring sufficient frictional force to prevent the screw connection becoming unscrewed], and

wherein the spring element is of lower hardness than the screw element, and

wherein the spring element has projections in the region of-the workpiece contact (in view of Hsiao).

With regard to that in brackets [] above: Note that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation, but only requires the

ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison, 69 USPQ 138.*

Response to Arguments

[4] Applicant's arguments filed 8/8/2006 regarding rejections under 35 U.S.C. 103 have been fully considered but they are not persuasive. To begin, the applicant states of the differences between the claimed invention and each the references, individually (see pages 5-6 of applicant's remarks). In response to Applicant's piecemeal analysis of the references, it has been held that one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references. *In re Keller*, 208 USPQ 871 (CCPA 1981).

Continuing, the applicant states of the utility of the invention, "the claimed invention seeks to provided a screw which is specifically adapted to secure electric or electronic components made of soft materials...it is important to recognize two basically different approaches when seeking to avoid loosening of screw connections...not sufficient to remove the oxide layer...etc"(pages 6-8 of applicant's remarks). In response, the examiner would like to point out that it is the claims that define the claimed invention, and it is claims, not specifications, drawings, or remarks that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064.

Continuing, with the bottom of page 8 of applicant's remarks, it is stated "The examiner objects to pending claim 7 to be unpatentable over..." In response, the examiner is confused and assumes that applicant was referring to the examiner's rejection of claim 7 over EP 0989311 in view of Wagner; not objection. Nevertheless, continuing, the applicant states that EP 0989311 does not teach of the spring element having a lower hardness than the screw element.

The applicant then goes on to state that due to such a lack of teaching, there is a "strong indication" that one skilled in the art would implicitly derive a completely "contrary teaching". The applicant goes on to state what this "contrary teaching" is without any suggestion or motivation from the prior art of EP 0989311. The examiner disagrees, and when viewing the claimed subject matter the Applicant is reminded that claims in a pending application should be given their broadest reasonable interpretation. *In re Pearson, 181 USPQ 641 (CCPA 1974)*, and that things clearly shown in reference patent drawings qualify as prior art features, even though unexplained by the specification. *In re Mraz, 173 USPQ 25 (CCPA 1972)*. The claimed subject matter states that the spring element is of a lower hardness than that of the screw element. The examiner believes as well that there is a "strong indication" that one skilled in the art would implicitly derive that the spring element, due to its "spring like" characteristics and ability of bend back and forth as shown by the figures accompanying EP 0989311 would indeed be classified to one skilled in the art as having a lower hardness than the screw element.

Lastly, the applicant refutes the combination of EP 0989311 and Wagner in view of Hsiao. Applicant states that there is no suggestion to combine these two references ("approaches"). In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209

(CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969. It is not required that the prior art disclose or suggest the properties newly-discovered by an applicant in order for there to be a prima facie case of obviousness. *See In re Dillon, 919 F.2d 688, 16 USPQ2d 1897, 1905 (Fed. Cir. 1990)*. Moreover, as long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor. *See In re Beattie, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992); In re Kronig, 539 F.2d 1300, 190 USPQ 425 (CCPA 1976) and In re Wilder, 429 F.2d 447, 166 USPQ 545 (CCPA 1970)*. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller, 642 F. 2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)*. In this regard, a conclusion of obviousness may be based on common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference. *In re Bozek, 416 F .2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)*. Finally, the fact that Applicant may use the projections for a different purpose does not alter the conclusion that its use in a prior art device would be prima facie obvious from the purpose disclosed in the reference. *In re Lintner*, 173 USPQ 560.

Conclusion

[5] **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached at (571) 272-7075. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Reese
Assistant Examiner
Art Unit 3677

DCR

10/11/06

ROBERT J. SANDY
PRIMARY EXAMINER